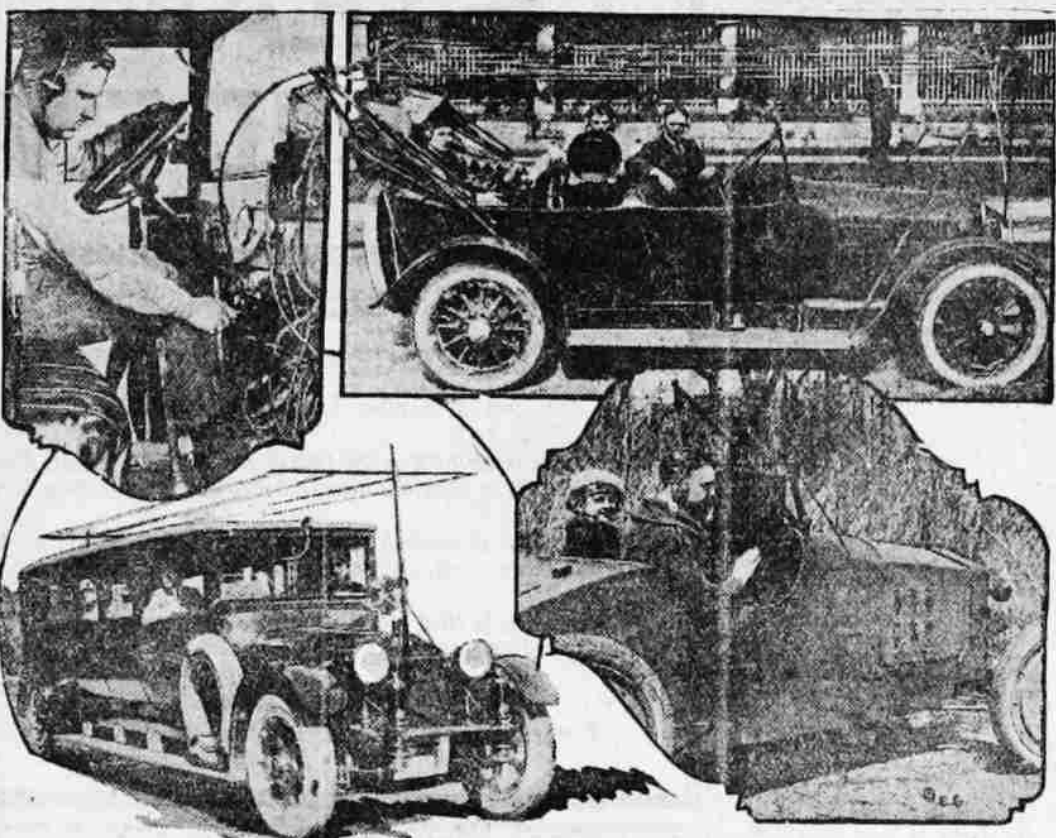


Radiographs

RADIO AND AUTO, TWIN BROTHERS IN DEVELOPMENT



AUTOMOBILES AND RADIO—LEFT, ABOVE, DRIVER AS RADIO OPERATOR OF BUS; BELOW, RIGHT, ABOVE, TOURING AUTO WITH RADIO SET; BELOW, "HOME-MADE" AUTO AND RADIO.

Two of the latest achievements of mankind have joined hands. Automobiles and radio. Henceforth, there will grow up together, almost as twins, for their own increased benefit and pleasure.

Signs of their progress come from all parts of the United States. Automobiles are going on tours, hand-in-hand with younger brother radio. Even automobile buses have taken radio along for the pleasure of the occupants.

Running out of Oakland, Calif., neighboring cities, one of a fleet of motor buses entertains its passengers with radio concerts picked up from the city. The chauffeur is radio operator also.

Highways throughout the country will encounter the novel stunt of radio-equipped touring automobiles. A Denver enthusiast has rigged up his machine with a complete radio receiving set so as to keep in touch with the city wherever he may be.

His aerial takes the form of a flat-top, 15-wire type. The receiver has a vacuum tube detector and three stages of amplification connected to a loud-speaker. The automobile's storage battery furnishes the filament current, and a radio "B" battery is under the back seat for plate current.

Another motor enthusiast has shown an equal interest in radio by building his own automobile and radio set. He is R. E. Leppert, Jr., 17, of Harrison, N. Y.

Young Leppert designed and built both machine and radio set complete. Now he takes his sister Vera for a spin in the country, where they stop occasionally to tune in on a radio concert from a distant broadcasting station.

SHADOWS INTERFERE WITH RADIO MESSAGES

By PAUL F. GODLEY

America's Foremost Radio Authority.

With electric waves, as with light waves, there are certain objects which cast shadows.

A radio receiving station which chances to be in one of these shadows will no more receive the radio signals than will the eye of an observer if he is shadowed from a source of light.

In some cases the cause of radio shadows has been traced. But in many instances, the causes are still unknown.

Ocean-going vessels carrying comparatively high power telegraphic transmitters find great difficulty in communicating 50 miles across certain portions of Long Island. No one knows why.

The broadcasting station at New York, N. J., is seldom satisfactorily received in Atlantic City where clear signals are heard from the station at Pittsburgh, several hundred miles away. Yet the power of the two stations is practically the same.

STEEL STRUCTURES.

In large cities, a group of steel buildings frequently casts radio shadows that make it difficult to receive signals of any character from points in the direction of these buildings.

Sometimes mountains may have the same effect, although in many cases they have no effect at all.

Recently a series of tests were carried out on board a moving train of the Delaware, Lackawanna & Western railroad. The operators in charge stated that in some cases, even when passing through a deep cut, there would be no noticeable effect whatever on the strength of the received signals, while at other times, even a small hill seemed to throw a decided shadow.

It is quite likely that the geological formations have something to do with these "dead spots." Their existence has been known for many years. But it is only now that any definite effort has been made to explore them.

FORESTS.

Forests, when in leaf, tend to absorb radio energy. Stations planted in the heart of a thick woods frequently find great difficulty in effecting a reception of radio signals from distant points.

Vessels plying up and down the Amazon river are seldom able to communicate with each other over distances greater than 25 or 30 miles, although their normal daytime range is 250 miles.

A large radio company recently undertook the exploration of the Atlantic coast in an effort to locate places which are shadowed in all directions except seaward. Several such points were located. Large stations for the communication with ships at sea will probably be erected there.

Such stations would be shielded from interfering effects produced in inland directions.

Some day we may be able to fully understand the causes of radio shadows and find out how to master them.

Loop Receiver

Used to Locate Interference

By PAUL F. GODLEY

America's Foremost Radio Authority.

A faulty fuse of transformer in the light supply wire, a high tension wire which swings and touches a tree, or sometimes a young boy who does not appreciate what a nuisance he is making of himself, will cause interference which may render signals from distant points totally unintelligible.

Where interference of this nature persists, the radio inspector may be called in, or, if he is not available, the members of your radio club. Either of these should be able to locate the sources of interference.

Before the loop or coil antenna came into prominence, receiving apparatus was frequently set up in an automobile with a small antenna on top of the car, the receiver tuned to the disturbing signal, and the auto set under way. The idea was to circle through a given territory, the trend of the circle always being in that direction where signals seemed loudest.

Finally the signals would be definitely located within a small area, where the search would be concentrated for the source of the disturbance.

The use of a loop or coil antenna



Radio Shadows Around New York, Shown by Shaded Areas.

PRIESTS ELIMINATES JAZZ BY USE OF LOUD SPEAKER

Jazz will eliminate itself—by radio. So says Rev. Frederick L. Odenbach, famous scientist and director of St. Ignace college observatory at Cleveland, O.

In fact, Father Odenbach claims he has found a way to eliminate jazz by radio. This, by means of a loud speaker which he has fashioned out of a large conch shell.

The winding staircase of the human ear gave Father Odenbach the idea of the jazz-eliminating conch shell. He sawed off the tip to make an opening about an inch and a half wide and widened out the winding aperture until the other end had an opening about the size of a finger.

He attached a rubber hose to it, leading from the telephone receiver, and there he had his loud speaker.

"With this horn attached to a radio receiving set," says Father Odenbach, "jazz will eliminate itself, since sound is brought out to the smallest detail. Jazz distilled in this way is found to be one-third dissonance, one-third bad tuning and one-third the beating of drums gone mad."

"Coming out of the shell," it will drive a cat out of the room."

simplifies this search considerably. As is well known, the loop antenna receives best when it lies in the plane through which the signal advances. If the plane of the loop points toward the transmitting station, the signal is loudest. If the plane of the loop is at right angles to the direction of propagation of the signals, no call will be received.

Two such loops set at some little distance from each other will be able to closely approximate the location of the source of disturbance. The locality is then visited and careful examination made.

In case of electric light wires, it will usually be found that a high tension circuit is discharging into the branch of a tree, or that a defective fuse on the transformer pole is giving the trouble.

BOY'S SET

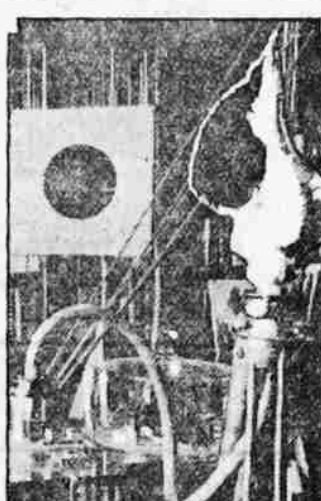
In the case of a small boy's set, his antenna usually will give him away. If the chances to be indoors, inquiry in the neighborhood generally will disclose the culprit.

I have visited communities where, for weeks at a time, faulty lighting circuits or high tension transmissions lines caused so much trouble as to make it impossible for anyone within a radius of several miles to satisfactorily receive broadcast programs.

When conditions such as these exist, it should fall upon the public service company to take whatever steps are necessary to eliminate the fault. Usually they are more than glad to cooperate.

SPORTS SKIRTS.

Sports skirts of white homespun are very popular now. Often they are fringed about the bottom or bound with ribbon. Sometimes they are bunched with wool, in white or in color.



Rev. F. L. Odenbach and His Conch Shell Loud Speaker.

RADIO PRIMER

Umbrella Aerial—An aerial supported by one central post from which the antenna wires stretch in umbrella or tent form to small masts encircling it. The lead-in wire is joined to taps taken from each of the wires of this aerial near the central mast.

Hertzian Waves—Another term for radio frequency waves. These were named so because of the discovery of these electro-magnetic waves by Prof. Heinrich Hertz in 1887.

V-Type Aerial—A single wire aerial connected to three masts so as to form a V parallel to the ground. The lead-in is taken from the point of the V.

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10c

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BRIGHAM SOCIETY

(Continued from Page Three)

gram, dancing was enjoyed, and refreshments were served. About 25 couples were present.

The marriage of Miss Myrtle Lillywhite and Fred Sorensen took place Wednesday in the Salt Lake temple. The bride is the daughter of Mr. and Mrs. J. H. Lillywhite of Harper. She is a graduate of the Box Elder high school and is one of the leading ladies of her social set. Mr. Sorensen is the son of Mr. and Mrs. Fred Sorensen of this city, and has been engaged in business with his father the past few years. They expect to leave soon for the Tonga mission field to perform missions for the L. D. S. church. They will leave a host of friends who wish them success and happiness.

Mrs. J. C. Lillywhite entertained Monday evening at her home in honor of Miss Myrtle Lillywhite and Fred Sorensen. Shasta daisies and roses were used in the decorations. Progressive games were played and a tray luncheon was served to forty guests.

The Bee Hive girls of the Sixth ward were entertained Tuesday evening at the home of Miss Nellie Jensen. Following business discussion, musical numbers were rendered and refreshments were served.

Mrs. Preston M. Budge, Mrs. Jane E. Compton, and Mrs. Abe Tueller attended the state convention of the Utah American legion auxiliary, held at the Elks' home in Ogden, Thursday. Delegates to the convention Friday were Mrs. Amos Hatch, Mrs. Vera

Hurt, Mrs. Wilford Jensen, and Mrs. Compton. An interesting session was held Thursday, where Mrs. Edith Hobart, national commander of the American legion auxiliary, was the chief speaker. Among those elected to act on state committees, were Mrs. Jane E. Compton and Mrs. Amos Hatch, of this city.

The Lahnabey Swann of the Bee Hive girls hiked to Willowmere Thursday morning and spent the day. The girls prepared three delicious meals and during the day games and music were enjoyed. Those present were, Phyllis and Lucy Jensen, Louis Dunn, Carman Davis, Chloe Osborne, Mary Cotton, Edith and Friselle Nelson, Alice Wright and Mrs. Byron Cornia.

The Merridees club met Thursday evening at the home of Mrs. W. R. Holmes in compliment to Mrs. W. C. Calk. Season flowers decorated the room. Games and social intercourse featured the evening's entertainment, and dainty refreshments were served at a late hour. Miss Julia Pond, of Grace, Idaho, was a guest.

The M. C. society met Thursday evening at the home of Miss Mamie Halverson. Following games on the lawn and social diversion, refreshments were served at the Palace. Miss Jane Baty was a guest.

Mrs. Sarah White and daughters, of Salt Lake, who have been visiting here for a few days, were entertained Sunday by Mr. and Mrs. Fred J. Holton.

Mr. and Mrs. Fred Sorensen, Sr., and family, returned Wednesday evening from Salt Lake City, where they accompanied their son, Fred and Miss Myrtle Lillywhite to the temple. Mr. and Mrs. Sorensen, Jr., will return today and a reception in their honor

will be given by Mr. and Mrs. J. H. Lillywhite this evening.

Mrs. Jane E. Compton attended a music festival Thursday evening given by the faculty of the Weber Normal college at Ogden. Her daughter, Miss Jennie Compton, was scheduled as one of the soloists for the evening, and rendered two numbers.

Mr. and Mrs. J. A. Housack and Miss Dorothy Dimple of Bellingham Wash., are visiting at the home of Miss Jane Jensen of Honeyville. While en route to Salt Lake City, this morning they called on Mr. and Mrs. D. C. Walker for a short visit.

A swimming party, at the Honeyville springs, was enjoyed last Thursday evening by members of the Sugar club and their wives. Lunch was served late in the evening.

Mrs. J. R. Stappard and son, Royce, of Edison, Canada, are visiting with Mrs. Stappard's mother, Mrs. C. W. Crookman. Mrs. Stappard reports a pleasant trip by way of Vancouver, Seattle and Portland. They will visit here for about three months.

The Just-a-Mere club, with their escorts, gave a delightful canyon party Friday evening in compliment to Mr. and Mrs. Lamont Glover. Supper was served around a bonfire.

Mr. and Mrs. Wilford Anderson of Wellsville, were visiting friends in Brigham City a few days ago. Wilford came over to boost for the Brigham ball team.

Mr. Albert Chaston of Salt Lake City visited in Brigham a few days last week at the home of Mr. and Mrs. William Chaston, who reside on North Fourth East streets.

Mrs. Lewis S. Wright was operated on at the St. Mark's hospital in Salt Lake City, last week and is reported to be getting along nicely.

The Civic Improvement club entertained at a Kensington Thursday afternoon on the court house lawn. Flapping with the Fourth of July, and a profusion of season flowers, beautified the grounds. A musical program was given, consisting of a cornet solo by Clifford Watkins; trombone solo, Newman Watkins; vocal solo, Melba Wright; all accompanied by Clara Watkins; duet, Doris Boothie and Clara Watkins, accompanied by Vera Preston. Luncheon followed and favors of tiny flags, rambler roses and babybreath were used. Mrs. Clyde Strickford, Mrs. W. O. Knudson and Mrs. Dan Peterson were hostesses and Mrs. Halverson, Mrs. E. M. Tyson, Mrs. Lawrence Hansen, Mrs. Ben Knudson, Mrs. Claude Jensen, Mrs. W. J. Low and Mrs. George Fister.

The Sea Gull camp of the Daughters of the Pioneers met Thursday evening at the home of Mrs. Agnes Fife in honor of Mr. J. C. Jensen. A talk on Brigham Young as a colonizer was given by Mrs. Amy Wright. Daisies and Sevens Madson gave a duet and the "Sea Gull" was read by Vera Jensen. A sketch of the life of Mrs. Thompson. Refreshments were served by Agnes Fife, Thilo Vincent and Emma Lee. Eighteen visitors and guests, including Mrs. Sarah Joseph and Mrs. Eliza Watkins of the center camp, were present.

The alphabet of the Tart is composed of 26 letters.

Canada possesses nearly half the water power of the world.